Science - Curriculum Overview -SPRING 2027

Year 7	
What are you teaching? Spring 1	**What are you teaching? Spring 2**
Reactions I Structure & Function of body systems	**Sound & Light**
Why have you chosen to teach this unit, and this time?	
- Using and deepening the understanding of chemistry started last term, Reactions enables students to use this knowledge and look at chemical phenomena. - Structure and function of cells means that the cells have become organs and systems and students are able to study the result of the organisation of cells. - Sound and Light are the first things that most humans encounter in life. The understanding of how these are generated and used will enable students to understand themselves better as it teaches them how else they unknowingly interact with the physical world.	
What are the 3 key pieces of knowledge you will have expected students to acquire by the end of this unit?	
- That we are able to determine properties of chemical reactions. - That we are built like the world and made of many parts that work together to create a functioning system. - That light and sound are forms of energy that our body systems detect and interact with.	
Is this topic on the National Curriculum? Yes **Will all staff be teaching this unit?** Yes	

Year 8	
What are you teaching?Spring 1	**What are you teaching? Spring 2**
Separation Techniques / biological processes	**Ecosystems and Adaptations / Energy**
Why have you chosen to teach this unit, and this time?	

Building on the work covered in the Autumn term on bonding to make chemical compounds, this further looks at how to make sure that students are able to choose the correct equipment and techniques to split mixtures and produce pure substances. This is necessary in all areas of science from distilling crude oil to making water potable. The understanding of how we interact with our environment and hence the movement of energy whether it be to ensure that we have fuel for vehicles or to simply sustain life.
What are the 3 key pieces of knowledge you will have expected students to acquire by the end of this unit?
- Use of different separation equipment - Understanding different processes that are fundamental to life. - That every process is driven by energy and to identify some of these processes and their impact.
Is this topic on the National Curriculum? Yes **Will all staff be teaching this unit?** Yes

Year 9	
What are you teaching? Spring 1	**What are you teaching? Spring 2**
Bonding / Electricity	**Infection and Response**
Why have you chosen to teach this unit, and this time?	
Bonding builds on the previous atomic structure and periodic table unit to start looking at the properties of substances and how these are related to their bonds. Electricity and conduction and inoculation of electricity is a property of a substance and this further deepens the understanding of the bonding unit. Having looked at materials, it is important to look at the next stage of systems and functions and understand when body systems do not work properly because of disease.	
What are the 3 key pieces of knowledge you will have expected students to acquire by the end of this unit?	
- That there are 3 types of bonding and these determine a substance's properties - Electricity i a type of energy that involves moving charge - Infections are caused by pathogens which can be transmitted from one person to another.	

Is this topic on the National Curriculum? Yes **Will all staff be teaching this unit?** Yes

Year 10	
What are you teaching?Spring 1	**What are you teaching? Spring 2**
Inheritance and Variation / Evolution	**Rate of Chemical change /Forces & Motion**
Why have you chosen to teach this unit, and this time?	
- Follows on from previous topics. Although more complex, it builds on the prior knowledge	
What are the 3 key pieces of knowledge you will have expected students to acquire by the end of this unit?	
- **That we inherit our features from our parents.** - **That genetic variation drives evolution** - **That particles react when they collide with enough energy to break bands in reactant and create new bonds in the product formed**	
Is this topic on the National Curriculum? Yes **Will all staff be teaching this unit?** Yes	

Year 11	
What are you teaching? Spring 1	**What are you teaching? Spring 2**
Atmosphere project review / Ecology	**Reteaching areas of weaknesses identified**
	in mocks and revising for the GCSE
Why have you chosen to teach this unit, and this time?	
Ecology is best taught when the earth begins to warm and plants are starting to regrow for spring. It enables field work to be done in favourable weather too.	
What are the 3 key pieces of knowledge you will have expected students to acquire by the end of this unit?	
- **The diversity is important in maintaining sustainability for future generations** - **That Carbon and Nitrogen are among the substances recycled on the planet** - **That is the responsibility of humans to ensure that raw materials are preserved for future generations.**	
Is this topic on the National Curriculum? Yes **Will all staff be teaching this unit?** Yes	